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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,930	03/12/2004	Minoru Oka	OMRNP081	6825

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BEYER WEAVER & THOMAS LLP
P.O. BOX 70250
OAKLAND, CA 94612-0250

EXAMINER

BARNES, CRYSTAL J

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,930

Applicant(s)

OKA ET AL.

Examiner

Crystal J. Barnes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 13 January 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1-9 are pending in this application.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Japan on 13 March 2003 and 3 March 2004. It is noted, however, that applicant has not filed certified copies of the 2003-068920 and 2004-059865 applications as required by 35 U.S.C. 119(b).

Information Disclosure Statement

3. The examiner has considered the information disclosure statements (IDS) submitted on 13 January 2005.

Drawings

4. The drawings are objected to because reference numbers "S11-S15" in figure 4 and "ST11-ST15" on pages 10-11 have both been used to designate

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steps of flowchart of figure 4 and figure 5 has been used to designate both figure 5A on page 11 line 1 and figure 5B on page 11 line 26.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in

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the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1-9 are rejected under 35 U.S.C. 102(a) as being anticipated by US Pub. No. 2003/0144753 A1 to Otani et al.

As per claim 1, the Otani et al. reference discloses a control system comprising: a programmable controller (see page 4 [0044], "programmable controller PLC") including a CPU unit ("CPU unit 2") that carries out cyclic operations of I/O refresh, user program execution and peripheral service processes; and a programming tool (see page 4 [0045], "tool 5") that edits said user program ("user programs"); wherein said programming tool ("tool 5") has the functions of uploading (see page 10 [0094], "uploading") and

downloading (see page 4 [0046], "downloaded") said user program ("user program") from and to said programmable controller ("programmable controller PLC"); and wherein said CPU unit ("CPU unit 2") includes two memories (see page 4 [0045], "user program memories") for storing said user program ("user program") and has the functions of: selecting one ("variable memory 14c") of said two memories (see page 5 [0048], "PRG memory 14a, variable memory 14c, flash memory 15"), when said programming tool ("tool 5") carries out an editing process (see page 4 [0046], "changes, editing") on said user program ("user program") while said cyclic operations ("input/output processing") are being carried out, and the user program ("user program") stored in said selected memory ("variable memory 14c") to be the object of execution; uploading ("uploading") said programming tool ("tool 5") and thereby outputting the user program ("user program") stored in selected one ("PRG memory 14a") of said two memories ("PRG memory 14a, variable memory 14c, flash memory 15") to said programming tool ("tool 5") while said peripheral service processes ("input/output processing for external devices") are being carried out; storing (see page 6 [0063], "storing"), while said peripheral service processes ("input/output processing

for external devices") are being carried out, a user program ("user program") downloaded ("downloaded") from said programming tool ("tool 5") in the other ("PRG memory 14a, flash memory 15") of said memories ("PRG memory 14a, variable memory 14c, flash memory 15") not storing a user program ("user program") being executed; switching the user program ("user program") stored in the other memory ("PRG memory 14a, flash memory 15") after the downloaded ("downloaded") user program ("user program") has completely been stored in the other memory ("PRG memory 14a, flash memory 15"), to become executed; and copying and storing (see page 8 [0077], "compiled and stored") the user program ("user program") stored in the other memory ("PRG memory 14a, flash memory 15") to and in the selected memory ("variable memory 14c").

As per claim 2, the Otani et al. reference discloses said CPU unit ("CPU unit 2") further has the function of further switching the object of execution ("object of execution") from the user program ("user program") stored in the other memory ("PRG memory 14a, flash memory 15") to the user program ("user program") stored in the selected memory ("variable memory 14c") when said programming tool ("tool 5") edits the user program

("user program") stored in the other memory ("PRG memory 14a, flash memory 15") while said cyclic operations ("input/output processing") are being carried out.

As per claim 3, the Otani et al. reference discloses a CPU unit adapted to upload and download a user program between a programming tool and to carry out cyclic operations of I/O refresh, user program execution and peripheral service processes; said CPU unit comprising two memories for storing said user program and having the functions of: selecting one ("variable memory 14c") of said two memories (see page 5 [0048], "PRG memory 14a, variable memory 14c, flash memory 15"), when said programming tool ("tool 5") carries out an editing process (see page 4 [0046], "changes, editing") on said user program ("user program") while said cyclic operations ("input/output processing") are being carried out, and the user program ("user program") stored in said selected memory ("variable memory 14c") to be the object of execution; uploading ("uploading") said programming tool ("tool 5") and thereby outputting the user program ("user program") stored in selected one ("PRG memory 14a") of said two memories ("PRG memory 14a, variable memory 14c, flash memory 15") to said programming tool ("tool 5")

while said peripheral service processes ("input/output processing for external devices") are being carried out; storing (see page 6 [0063], "storing"), while said peripheral service processes ("input/output processing for external devices") are being carried out, a user program ("user program") downloaded ("downloaded") from said programming tool ("tool 5") in the other ("PRG memory 14a, flash memory 15") of said memories ("PRG memory 14a, variable memory 14c, flash memory 15") not storing a user program ("user program") being executed; switching the user program ("user program") stored in the other memory ("PRG memory 14a, flash memory 15") after the downloaded ("downloaded") user program ("user program") has completely been stored in the other memory ("PRG memory 14a, flash memory 15"), to become executed; and copying and storing (see page 8 [0077], "compiled and stored") the user program ("user program") stored in the other memory ("PRG memory 14a, flash memory 15") to and in the selected memory ("variable memory 14c").

As per claim 4, the Otani et al. reference discloses a method of editing a user program of a programmable controller by using a programming tool, said programmable controller being connected to a CPU unit having two

memories for storing a user program and adapted to carry out cyclic operations of I/O refresh, user program execution and peripheral service processes; said method comprising the steps of: preliminarily storing said user program (see page 5 [0048], "user program") in said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") with same contents; selecting the user program ("user program") stored in a selected one ("variable memory area 14c") of said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") as the object of execution (see page 6 [0062], "execution object") before said user program ("user program") is edited with said programming tool (see page 4 [0045], "tool 5") and continuing said cyclic operations (see page 4 [0046], "input/output processing") by the CPU unit (see page 10 [105], "CPU unit 2"); uploading (see page 5 [0053], "read out data") a user program ("user program") stored in either of said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") with said programming tool ("tool 5") while said CPU unit ("CPU unit 2") is in operation, and editing (see page 4 [0046], "editing") said uploaded ("read out data") user program ("user program") with said programming tool ("tool 5"); downloading (see page 6

[0063], "downloaded") the edited ("edited") user program ("program"), after said step of editing ("edited") is completed and while said CPU unit ("CPU unit 2") is in operation, to the other (see page 6 [0061], "PRG memory area 14a") of said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") and storing ("storing") said downloaded user program ("user program") with said programming tool ("tool 5"); causing said CPU unit ("CPU unit 2"), after said step of downloading ("downloaded") is completed, to switch the object of execution ("execution object") from the user program ("user program") in said selected memory (variable memory area 14c) to the user program ("user program") in the other memory ("PRG memory area 14a") and to execute the edited ("edited") user program ("program") wherein said CPU unit ("CPU unit 2") is arranged to execute the edited ("edited") user program ("program"); and causing said CPU unit ("CPU unit 2") to store the edited ("edited") user program ("program") of the other memory ("PRG memory area 14a") to the selected memory ("variable memory area 14c") thereby causing said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") to store user programs ("user programs") with same content.

As per claim 5, the Otani et al. reference discloses said steps of uploading ("read out data") and downloading ("downloaded") are from and to the memory ("RAM 14") storing the user program ("user program") being executed by said CPU unit ("CPU unit 2") in said cyclic operations (see page 10 [0094], "cyclically").

As per claim 6, the Otani et al. reference discloses said steps of uploading ("read out data") and downloading ("downloaded") are executed while said CPU unit ("CPU unit 2") is executing said peripheral service processes (see page 4 [0046], "input/output processing for external devices").

As per claim 7, the Otani et al. reference discloses said CPU unit ("CPU unit 2"), when the user program ("user program") is edited next by said programming tool ("tool 5"), switches the object of execution (see page 8 [0077], "execution object") from the other memory ("PRG memory area 14a") to the selected memory ("variable memory 14c") and maintains the object of execution (see page 8 [0078], "execution object") thus switched until the downloading ("downloaded") of the edited ("edited") user program ("program") is completed.

As per claim 8, the Otani et al. reference discloses said CPU unit ("CPU unit 2"), when the user program ("user program") is edited next by said programming tool ("tool 5"), keeps the object of execution (see page 8 [0077], "execution object") unchanged from the other memory ("PRG memory area 14a") and continues to carry out said cyclic operations (see page 4 [0046], "input/output processing for external devices"); said programming tool ("tool 5"), after said step of editing ("edited") is completed and while said CPU unit ("CPU unit 2") is carrying out said cyclic operations ("input/output processing for external devices"), downloads ("downloaded") the edited ("edited") user program ("program") to the selected memory ("variable memory 14c") to be stored; and said CPU unit ("CPU unit 2"), after said edited ("edited") user program ("program") is stored, switches the object of execution (see page 8 [0078], "execution object") from the other memory ("PRG memory 14a, PRG backup memory 15a") to the selected memory ("variable memory 14c") and executes the newly edited ("edited") user program ("program").

As per claim 9, the Otani et al. reference discloses a method of processing with a propammable controller by using a programming tool, said

programmable controller having two memories for storing a user program and adapted to carry out cyclic operations of I/O refresh, user program execution and peripheral service processes; said method comprising the steps of: preliminarily having said two memories (see page 5 [0048], "PRG memory area 14a, variable memory area 14c, PRG backup area 15a") to store user programs ("user programs") with same contents; selecting the user program ("user programs") stored in a selected one ("variable memory area 14c") of said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") as the object of execution (see page 6 [0062], "execution object") and arranging such that said programming tool (see page 4 [0045], "tool 5") can write only ("downloaded") into the other ("PRG memory area 14a") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a"); transmitting to (see page 5 [0053], "read out data") said programming tool ("tool 5") the user program ("user programs") stored in either ("PRG memory area 14a") of said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") while said programming controller (see page 4 [0044], "programmable controller PLC") is carrying out said peripheral service processes (see page 4

[0046], "carrying out input/output processing") in said cyclic operations (see page 10 [0094], "cyclically"); storing the user program ("user programs") from said programming tool ("tool 5") in said the other (see page 6 [0061], "PRG memory area 14a") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") while said programming controller ("programmable controller PLC") is carrying out said peripheral service processes "carrying out input/output processing") in said cyclic operations ("cyclically"); switching the object of execution (see page 6 [0062], "execution object") from said one ("variable memory area 14c") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") to said the other ("variable memory area 14c") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") and causing the user program ("user programs") stored in said the other ("PRG memory area 14a") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") to be executed; and storing (see page 6 [0063], "storing") the user program ("user programs") stored in said the other ("PRG memory area 14a") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") in said one ("variable

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memory area 14c, PRG backup area 15a") of said memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") and causing the user programs ("user programs") in said two memories ("PRG memory area 14a, variable memory area 14c, PRG backup area 15a") to have same contents.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to programmable controllers in general:

USPN 6,584,540 B1 to Shinmori

USPN 5,659,705 to McNutt et al.

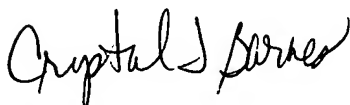
USPN 4,542,452 to Fukai et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



CJB

26 May 2005